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Anti-CP39 HU24-31 IN NSKGI (VERSION #1)

Pac I(271)

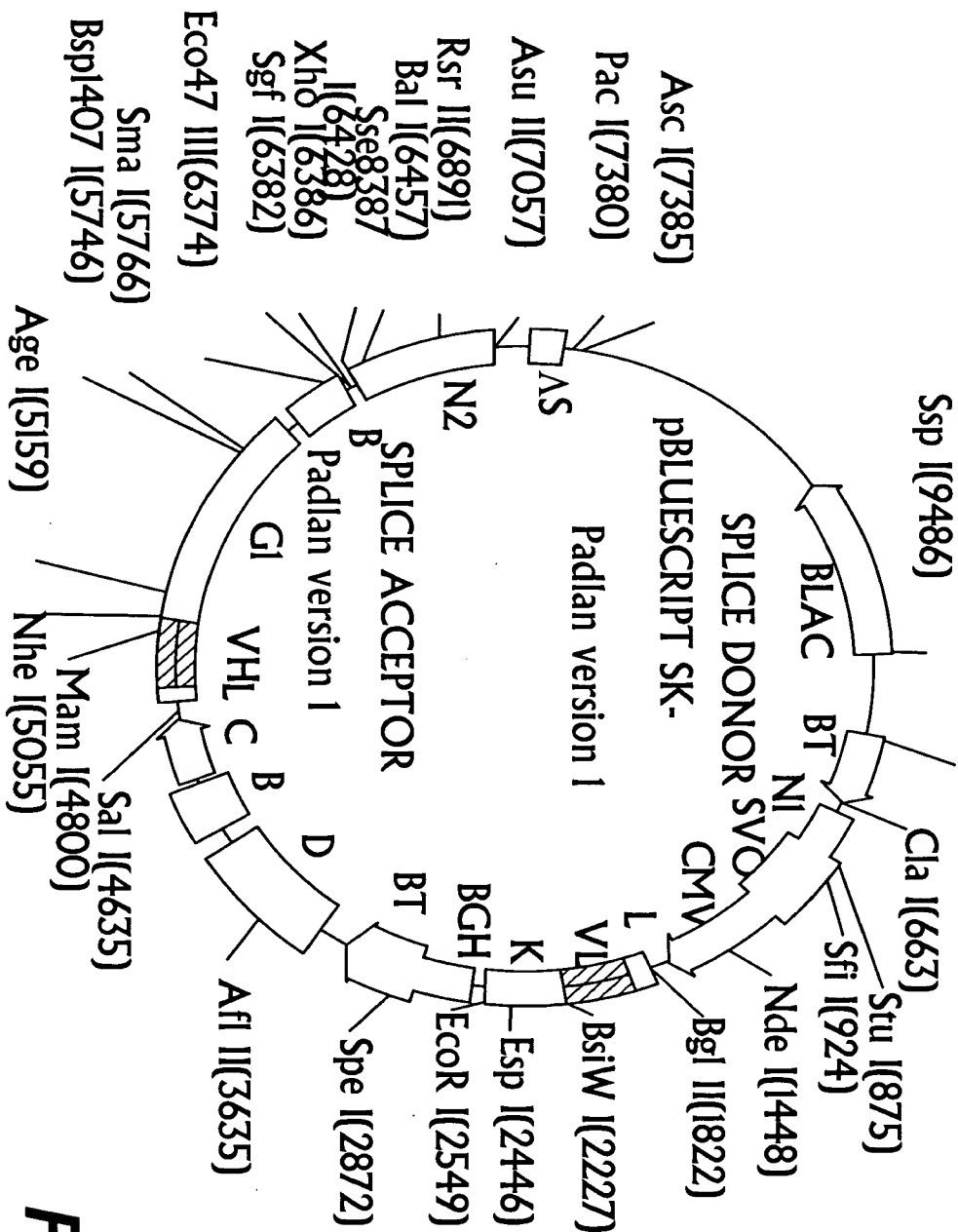


FIG. 1

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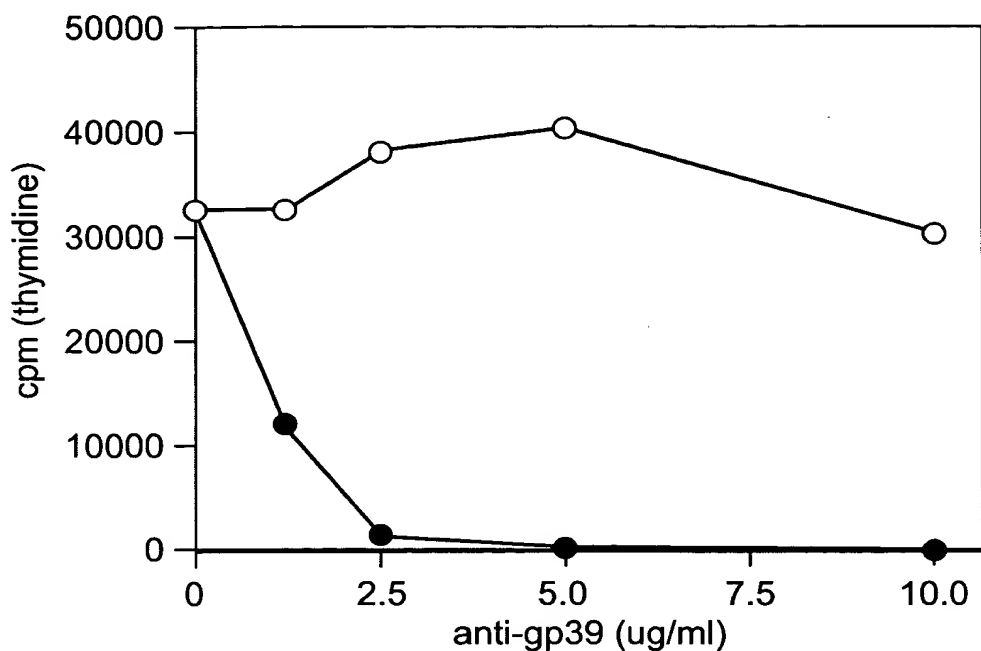


FIG. 2A

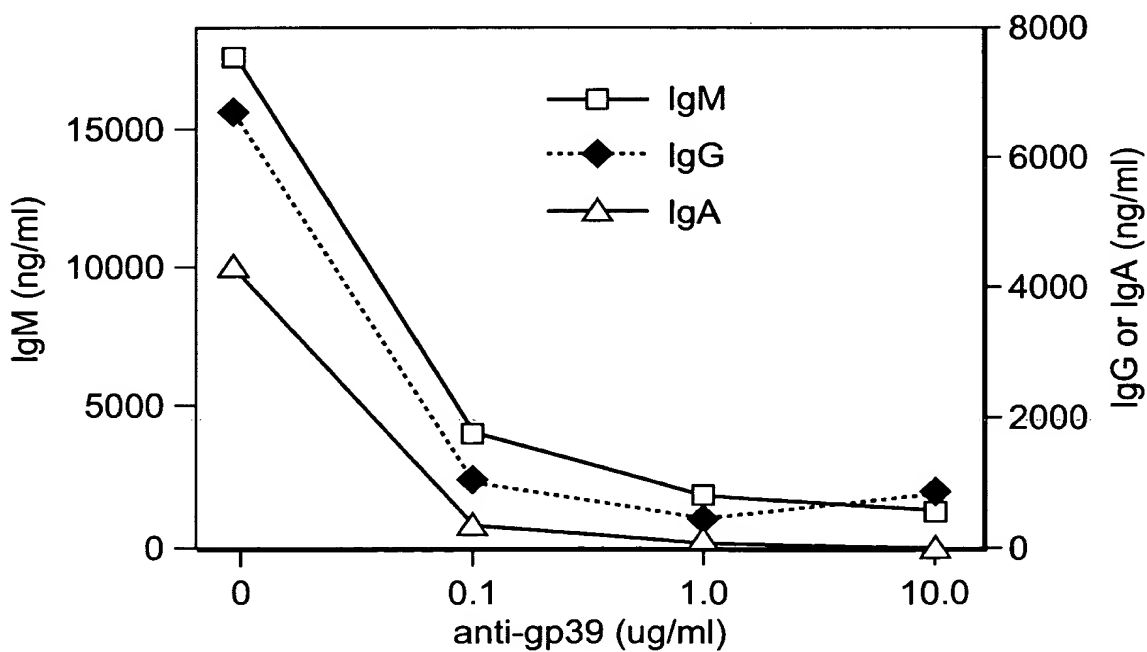


FIG. 2B

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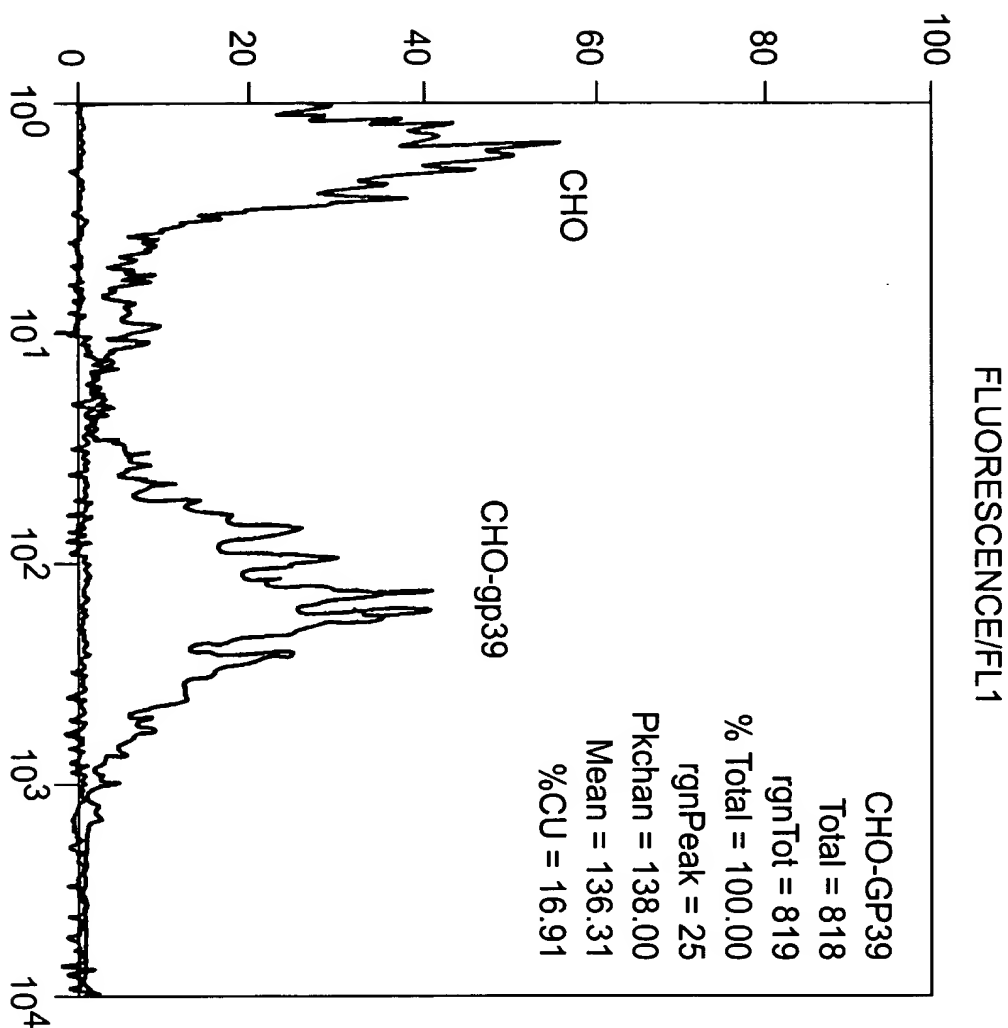


FIG. 3



24-31 Humanized V_L #1

5' <u>BglIII</u>			9	18			27	36			45	54						
AGA TCT			CTC	ACC	ATG	GGC	TTC	AAG	ATG	GAG	TCA	CAG	TTT	CTG	GCC	TTT	GTA	TTC
---			---	---	M	G	F	K	M	E	S	Q	F	L	A	F	V	F
GCG			63	72			81			FR1	90	99			108			
TTT	CTC	TGG	TTG	TCT	GGT	GTT	GAT	GGA	GAC	ATT	GTG	ATG	ACC	CAG	TCT	CCA		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
A	F	L	W	L	S	G	V	D	G	D	I	V	M	T	Q	S	P	
TCT			117	126			135			144			153			CDR1	162	
TTC	CTC	TCC	GCC	TCC	GTA	GGA	GAC	AGG	GTC	ACC	ATC	ACC	TGC	AAG	GCC	AGT		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
S	F	L	S	A	S	V	G	D	R	V	T	I	T	C	K	A	S	
CAG			171	180			189	FR2	198	207			216					
AAT	GTG	ATT	ACT	GCT	GTA	GCC	TGG	TAT	CAA	CAG	AAA	CCA	GGA	AAG	TCT	CCT		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Q	N	V	I	T	A	V	A	W	Y	Q	Q	K	P	G	K	S	P	
AAA			225	234			CDR2	243	252			FR3	261	270				
TTG	CTG	ATT	TAC	TCG	GCA	TCC	AAT	CGG	TAC	ACT	GGA	GTC	CCT	GAT	CGC	TTC		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
K	L	L	I	Y	S	A	S	N	R	Y	T	G	V	P	D	R	F	
TCA			279	288			297			306			315			324		
GGC	AGT	GGG	TCT	GGG	ACA	GAT	TTC	ACT	CTC	ACC	ATC	AGC	TCT	CTC	CAG	CCA		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
S	G	S	G	S	G	T	D	F	T	L	T	I	S	S	L	Q	P	
GAA			333	342			351	CDR3	360	369			378					
GAC	TTC	GCA	GAT	TAT	TTC	TGC	CAG	CAA	TAT	AAC	AGC	TAT	CCG	TAC	ACG	TTC		
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
E	D	F	A	D	Y	F	C	Q	Q	Y	N	S	Y	P	Y	T	F	
FR4			387	396			405			BsiWI			3'					
GGA	GGG	GGG	ACC	AAG	CTG	GAA	ATC	AAA	CGT	ACG								
---	---	---	---	---	---	---	---	---	---	---								
G	G	G	T	K	L	E	I	K	R	T								

FIG. 4

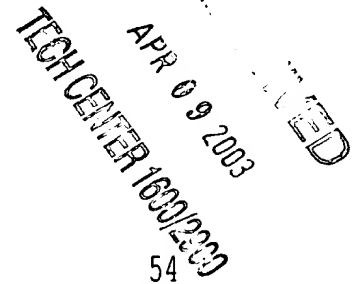


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24-31 Humanized V_L #2

5'	BglIII	9	18	27	36	45	54	
AGA	TCT	CTC	ACC	ATG	GGC	TTC	AAG	ATG
				GAG	TCA	CAG	TTT	CTG
				GCC	TTT	GTA	TTC	
				M	G	F	K	M
				E	S	Q	F	L
				A	F	V	F	
		63	72	81	90	FR1	99	108
GCG	TTT	CTC	TGG	TTG	TCT	GGT	GTT	GAT
				GGA	GAC	ATT	GTG	ATG
				ACC	CAG	TCT	CCA	
A	F	L	W	L	S	G	V	D
				G	D	I	V	M
				T	Q	S	P	
		117	126	135	144	153	CDR1	162
GAT	TCT	CTC	GCC	GTG	TCC	CTC	GGA	GAG
				AGG	GCC	ACC	ATC	AAC
				TGC	AAG	GCC	AGT	
D	S	L	A	V	S	L	G	E
				R	A	T	I	N
				C	K	A	S	
		171	180	189	FR2	198	207	216
CAG	AAT	GTG	ATT	ACT	GCT	GTA	GCC	TGG
				TAT	CAA	CAG	AAA	CCA
				GGA	CAA	TCT	CCT	
Q	N	V	I	T	A	V	A	W
				Y	Q	Q	K	P
				G	Q	S	P	
		225	234	CDR2	243	252	FR3	261
AAA	TTG	CTG	ATT	TAC	TCG	GCA	TCC	AAT
				CGG	TAC	ACT	GGA	GTC
				CCT	GAT	CGC	TTC	
K	L	L	I	Y	S	A	S	N
				R	Y	T	G	V
				P	D	R	F	
		279	288	297	306	315	324	
TCA	GGC	AGT	GGG	TCT	GGG	ACA	GAT	TTC
				ACT	CTC	ACC	ATC	AGC
				TCT	CTC	CAG	GCC	
S	G	S	G	S	G	T	D	F
				T	L	T	I	S
				S	S	L	Q	P
		333	342	351	CDR3	360	369	378
GAA	GAC	GTG	GCA	GAT	TAT	TTC	TGC	CAG
				CAA	TAT	AAC	AGC	TAT
				CCG	TAC	ACG	TTC	
E	D	V	A	D	Y	F	C	Q
				Q	Y	N	S	Y
				P	Y	T	F	
		FR4	387	396	405	BsiWI	3'	
GGA	GGG	GGG	ACC	AAG	CTG	GAA	ATC	AAA
				CGT	ACG			
G	G	G	T	K	L	E	I	K
				R	T			

FIG. 5



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FIG. 6



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Anti-gp39 24-31 V_K Sequence

5'	Bgl II		9		18		27		36		45		54					
	AGA	TCT	CTC	ACC	ATG	GGC	TTC	AAG	ATG	GAG	TCA	CAG	TTT	CTG	GCC	TTT	GTA	TTC
					M	G	F	K	M	E	S	Q	F	L	A	F	V	F
	63		72		81		+1		90		FR1		99		108			
	GCG	TTT	CTC	TGG	TTG	TCT	GGT	GTT	GAT	GGA	GAC	ATT	GTG	ATG	ACC	CAG	TCT	CAA
	A	F	L	W	L	S	G	V	D	G	D	I	V	M	T	Q	S	Q
	117		126		135		144		153		CDR1		162					
	AAA	TTC	ATG	TCC	ACA	TCC	GTA	GGA	GAC	AGG	GTC	AGC	ATC	ACC	TGC	AAG	GCC	AGT
	K	F	M	S	T	S	V	G	D	R	V	S	I	T	C	K	A	S
	171		180		189		FR2		198		207		216					
	CAG	AAT	GTG	ATT	ACT	GCT	GTA	GCC	TGG	TAT	CAA	CAG	AAA	CCA	GGA	CAA	TCT	CCT
	Q	N	V	I	T	A	V	A	W	Y	Q	Q	K	P	G	Q	S	P
	225		234		243		252		FR3		261		270					
	AAA	TTG	CTG	ATT	TAC	TCG	GCA	TCC	AAT	CGG	TAC	ACT	GGA	GTC	CCT	GAT	CGC	TTC
	K	L	L	I	Y	S	A	S	N	R	Y	T	G	V	P	D	R	F
	279		288		297		306		315		324							
	TCA	GGC	AGT	GGG	TCT	GGG	ACA	GAT	TTC	ACT	CTC	ACC	ATC	AGC	AAT	ATG	CAG	TCT
	S	G	S	G	S	G	T	D	F	T	L	T	I	S	N	M	Q	S
	333		342		351		360		369		378							
	GAA	GAC	CTG	GCA	GAT	TAT	TTC	TGC	CAG	CAA	TAT	AAC	AGC	TAT	CCG	TAC	ACG	TTC
	E	D	L	A	D	Y	F	C	Q	Q	Y	N	S	Y	P	Y	T	F
	FR4		387		396		405		Bsi WI		3'							
	GGA	GGG	GGG	ACC	AAG	CTG	GAA	ATC	AAA	CGT	ACG							
	G	G	G	T	K	L	E	I	K	R	T							

FIG. 7

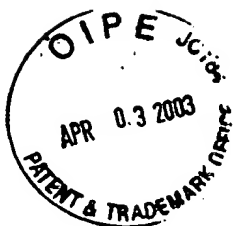


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Anti-gp39 24-31 V_H Sequence

5'	SalI		9			18			27			36			45			54		
	GTC	GAC	ATG	ATG	GTG	TTA	AGT	CTT	CTG	TAC	CTG	TTG	ACA	GCC	CTT	CCG	GGT	TTC		
			M	M	V	L	S	L	L	Y	L	L	T	A	L	P	G	F		
			+1																	
			63		FR1	72			81		90		99		108					
	CTG	TCA	GAG	GTG	CAG	CTT	CAG	GAG	TCA	GGA	CCT	AGC	CTC	GTG	AAA	CCT	TCT	CAG		
	L	S	E	V	Q	L	Q	E	S	G	P	S	L	V	K	P	S	Q		
			117			126			135		144		153	CDR1	162					
	ACT	CTG	TCC	CTC	ACC	TGT	TCT	GTC	ACT	GGC	GAC	TCC	ATC	ACT	AAT	GGT	TTC	TGG		
	T	L	S	L	T	C	S	V	T	G	D	S	I	T	N	G	F	W		
			171	FR2	180				189		198		207	CDR2	216					
	ATC	TGG	ATC	CGG	AAA	TTC	CCA	GGG	AAT	AAA	CTT	GAG	TAC	ATG	GGC	TAC	ATA	AGT		
	I	W	I	R	K	F	P	G	N	K	L	E	Y	M	G	Y	I	S		
			225			234			243		252		261	FR3	270					
	TAC	AGT	GGT	AGC	ACT	TAC	TAC	AAT	CCA	TCT	CTC	AAG	AGT	CGA	ATC	TCC	ATC	ACT		
	Y	S	G	S	T	Y	Y	N	P	S	L	K	S	R	I	S	I	T		
			279			288			297		306		315		324					
	CGC	GAC	ACA	TCC	CAG	AAC	CAG	TTC	TAC	CTA	CAA	TTG	AAT	TCT	GTG	ACT	ACT	GAG		
	R	D	T	S	Q	N	Q	F	Y	L	Q	L	N	S	V	T	T	E		
			333			342			351	CDR3	360		369		378					
	GAC	ACA	GGC	ACA	TAT	TAC	TGT	GCC	TGC	CGC	AGT	TAC	GGG	AGG	ACC	CCG	TAC	TAC		
	D	T	G	T	Y	Y	C	A	C	R	S	Y	G	R	T	P	Y	Y		
			387	FR4	396				405		414		423	NheI						
	TTT	GAC	TTC	TGG	GGC	CAA	GGC	ACC	ACT	CTC	ACC	GTC	TCC	TCA	GCT	AGC	3'			
	F	D	F	W	G	Q	G	T	T	L	T	V	S	S	A	S				

FIG. 8



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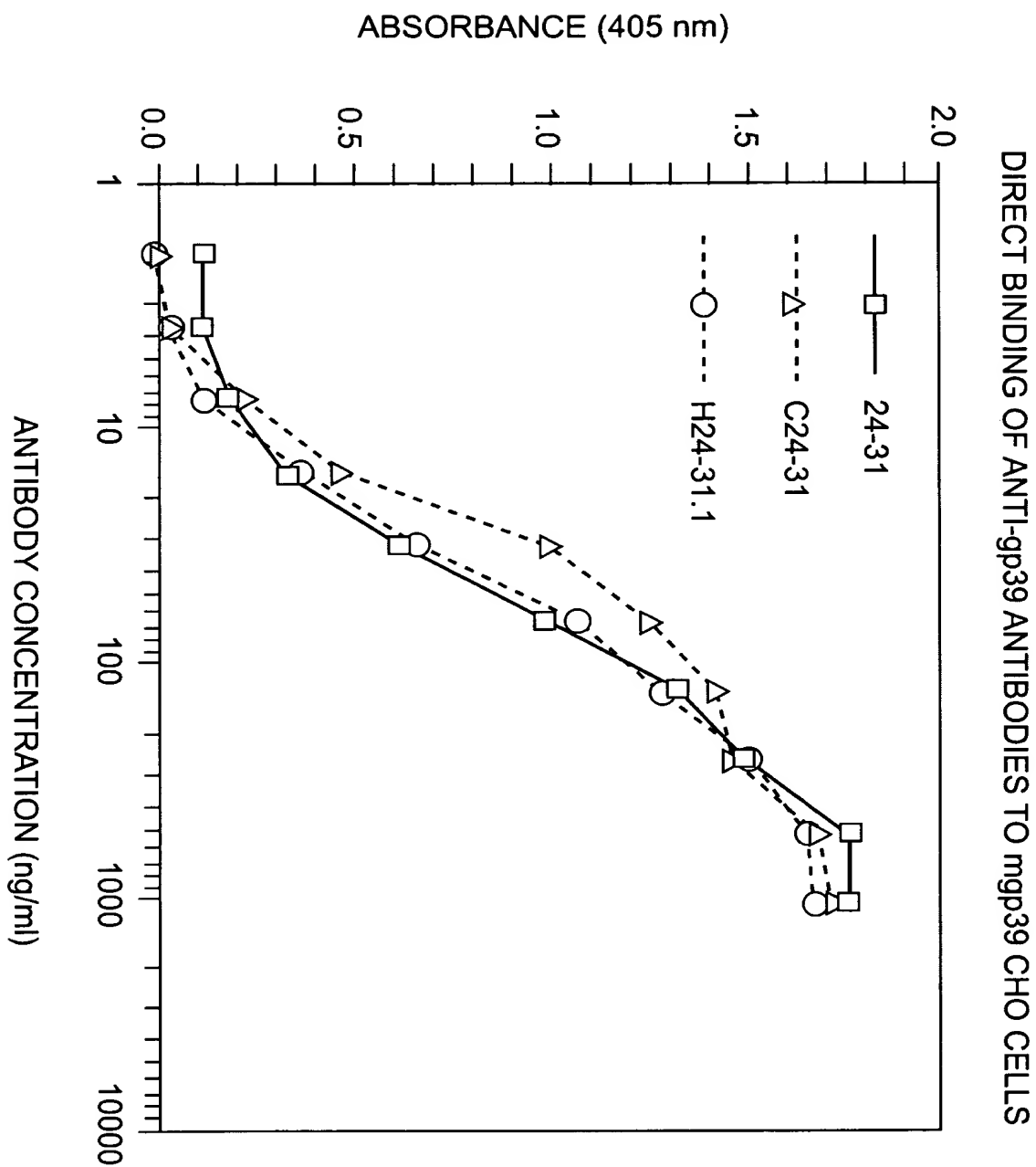


FIG. 9

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COMPETITION BINDING OF 200 ng/ml MOUSE ANTI-gp39 BIOTIN
 WITH ANTI-gp39 ANTIBODIES ON mpg39 CHO CELLS

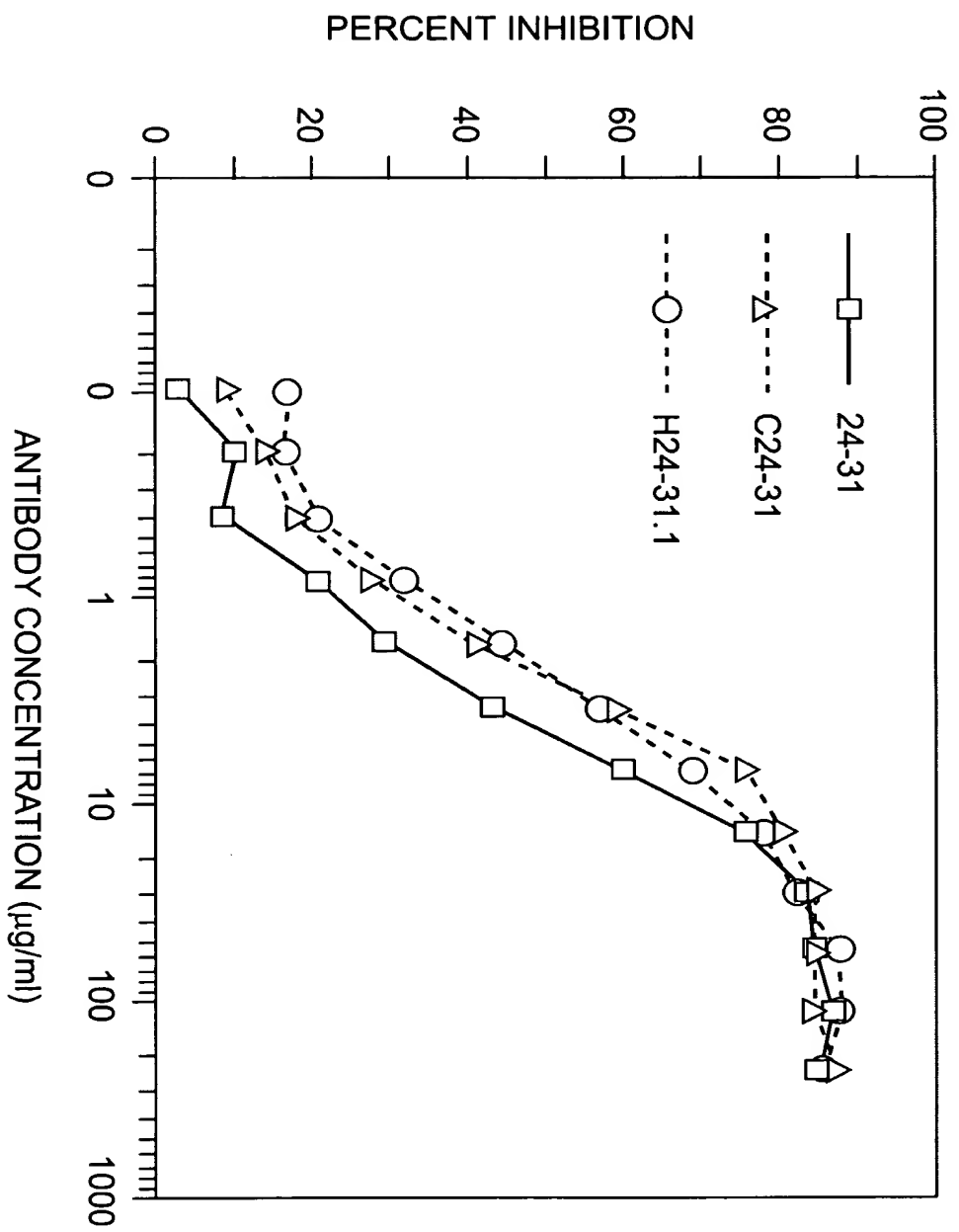
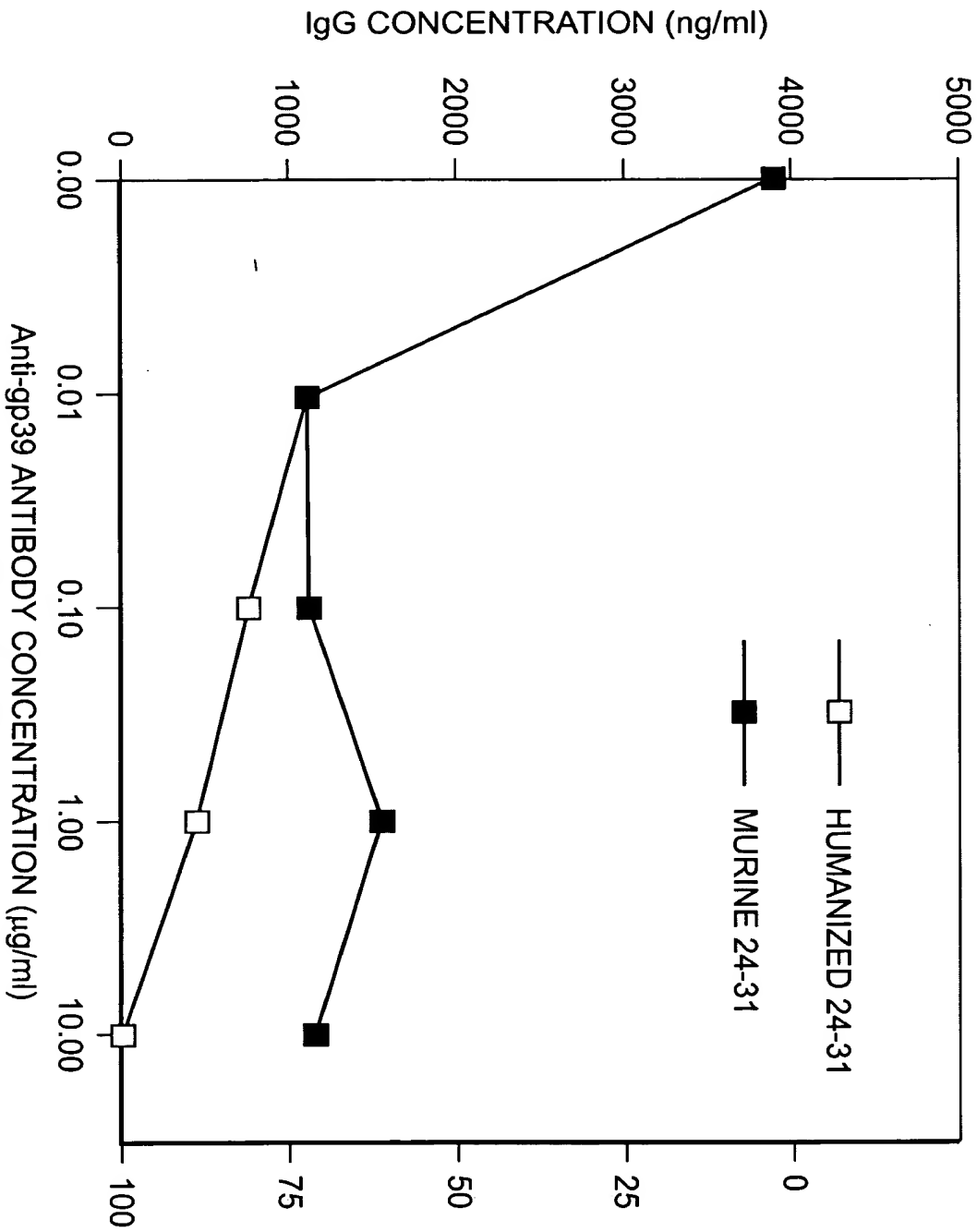


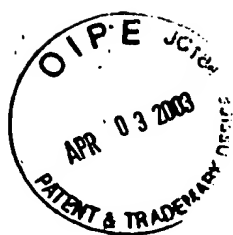
FIG. 10



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INVENTOR	SUBCLASS



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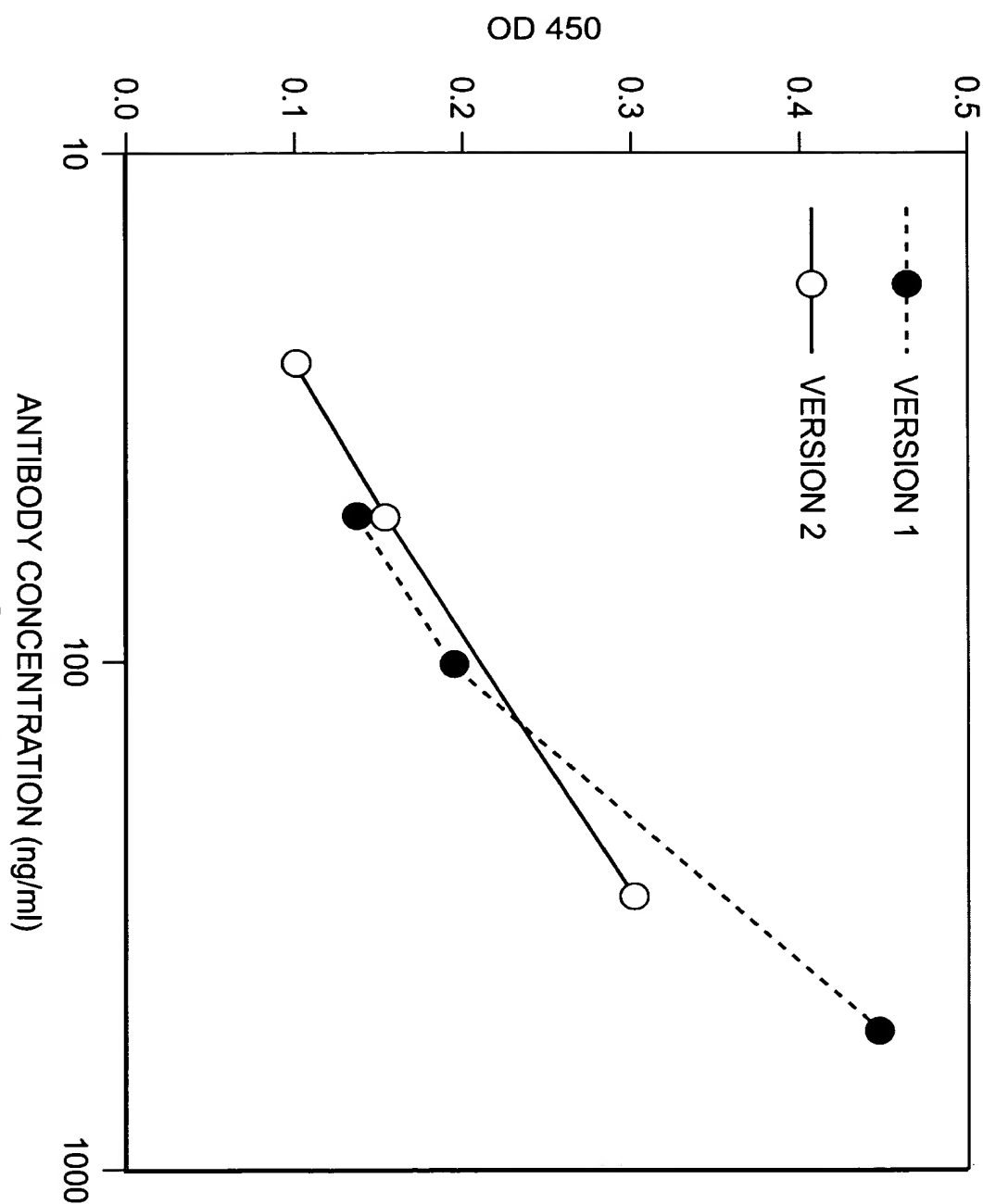


FIG. 12

APPROVED	O.G. FIG.	
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BY	CLASS	
DRAFTSMAN		

SCATCHARD ANALYSIS

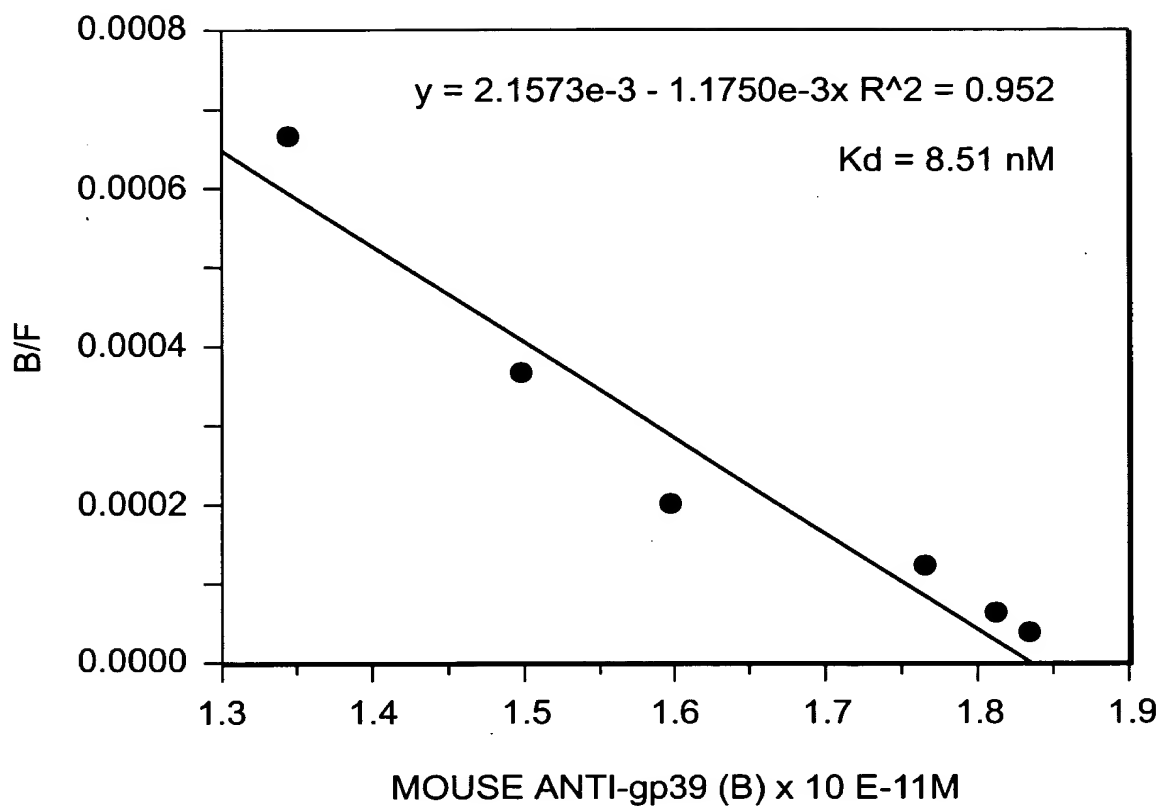


FIG. 13



APPROVED BY DRAFTSMAN	O.G. FIG.	
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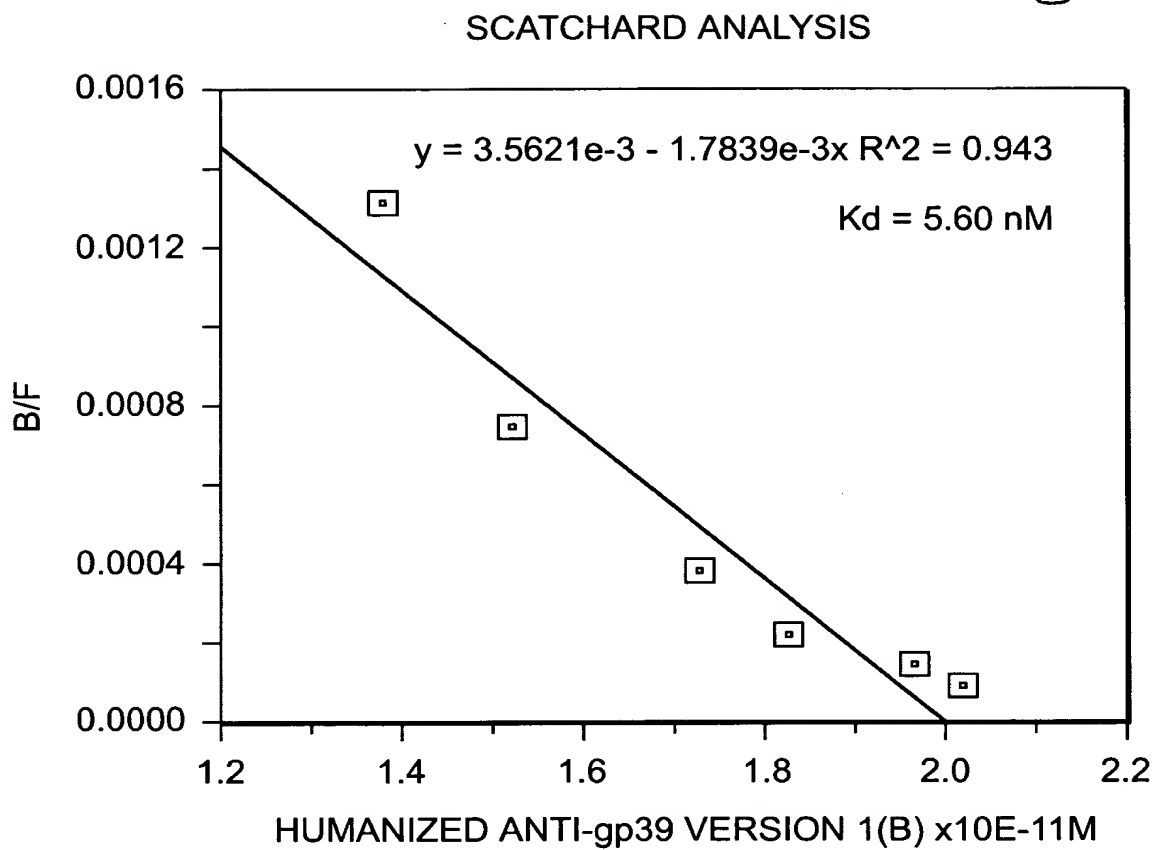


FIG. 14



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SCATCHARD ANALYSIS

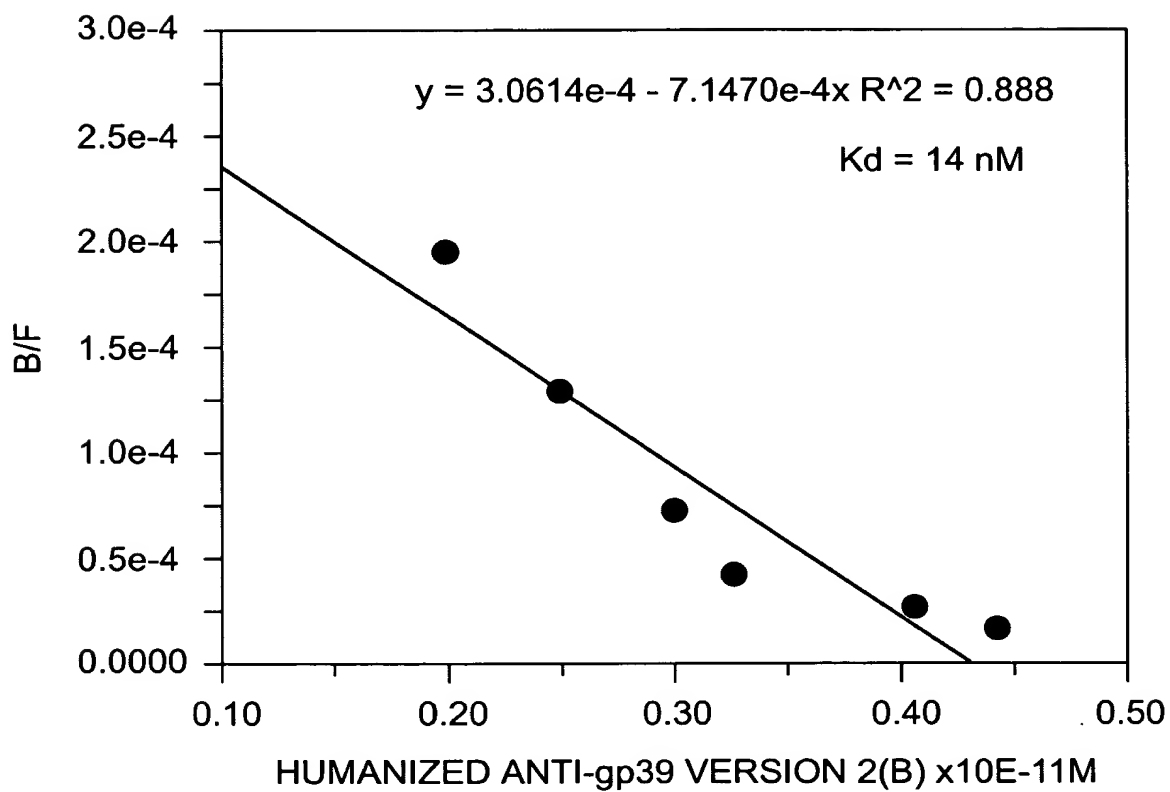
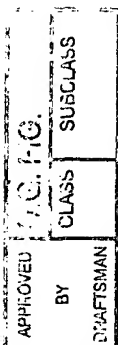


FIG. 15



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IMMOBILIZED ANTI-CAD3 (ng/mL)

IL-2 (pg/ml)

Legend:

- ANTI-CD3
- TRAP1 (3ng/ml)
- TRAP1 (30ng/ml)
- TRAP1 (100ng/ml)
- IDEC-131 (3ng/ml)
- IDEC-131 (30ng/ml)
- IDEC-131 (100ng/ml)
- CONTROL LGG (100ng/ml)

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APPROVED BY DRAFTSMAN	O.G. FIG.	SUBCLASS
	CLASS	

SOLUBLE ANTI-CD40L ANTIBODY (TRAP1) STIMULATES IL-4 CYTOKINE RELEASE FROM CD4+ T CELLS IN PRESENCE OF IMMOBILIZED ANTI-CD3

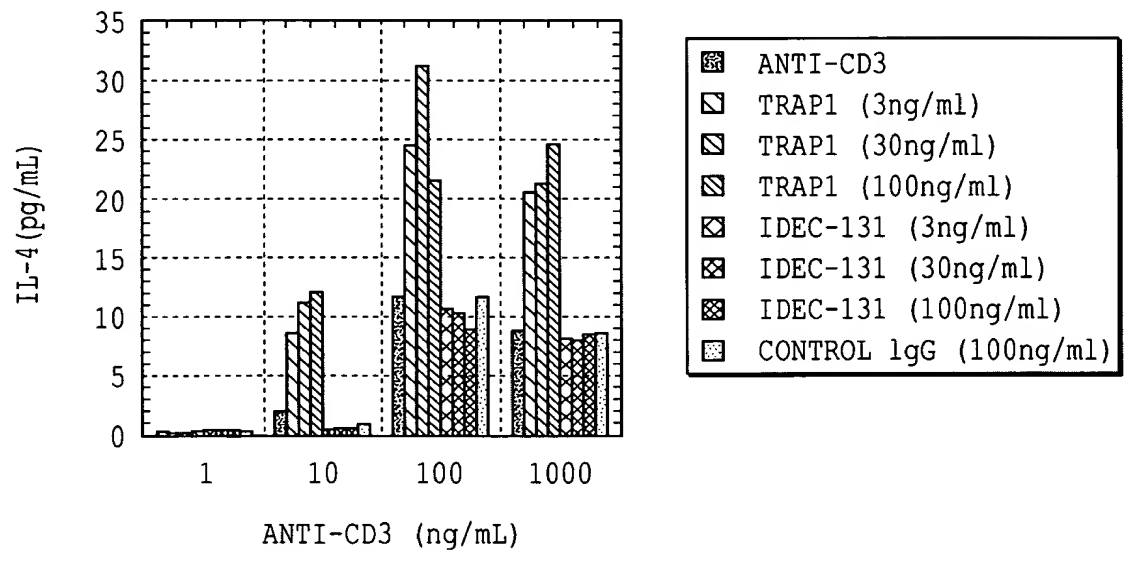


FIG. 17

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STIMULATION OF IL-2 BY AGONIST TRAP1 ANTI-CD40L IS DEPENDENT ON CO-STIMULATION WITH ANTI-CD3 AND SIGNALING THROUGH CD40L

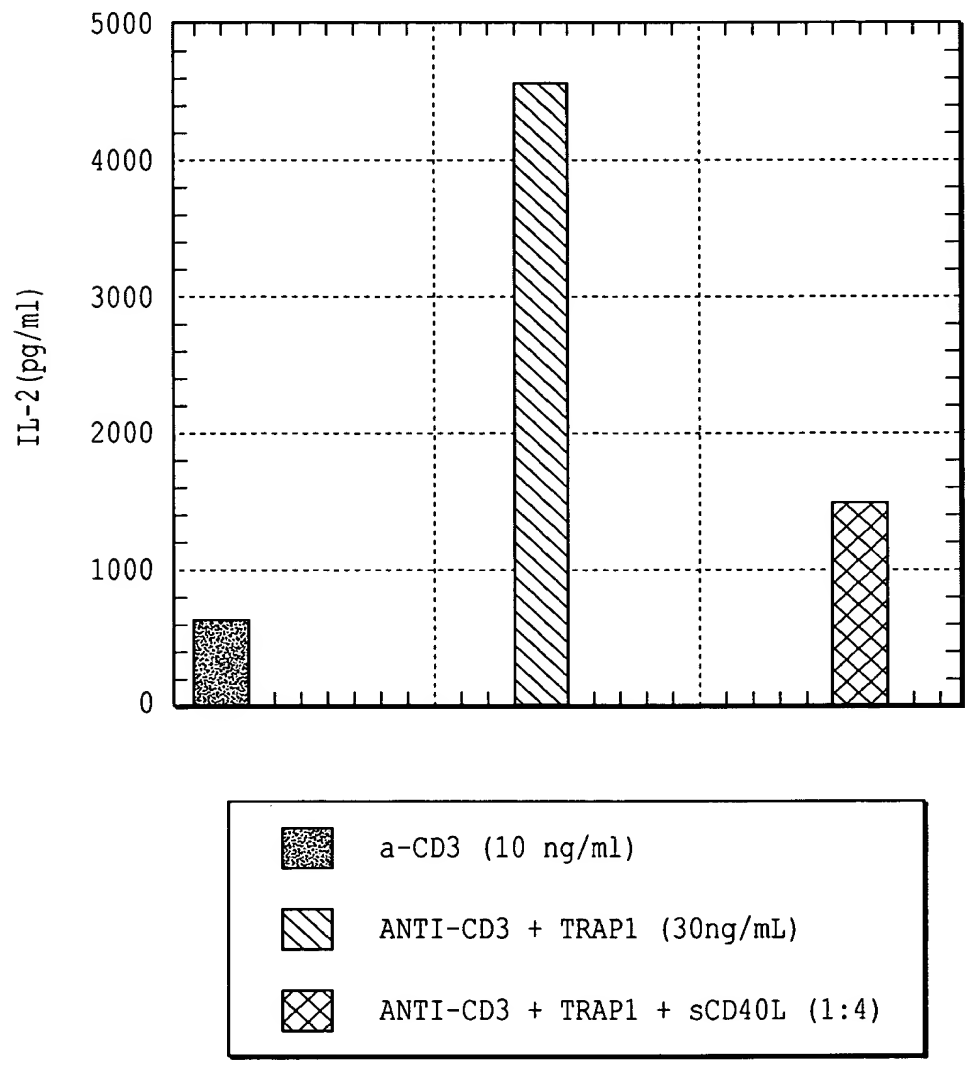


FIG. 18



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SOLUBLE ANTI-CD40L ANTIBODY (TRAP1) STIMULATES GAMMA INTERFERON RELEASE FROM CD4+ T CELLS IN PRESENCE OF IMMOBILIZED ANTI-CD3

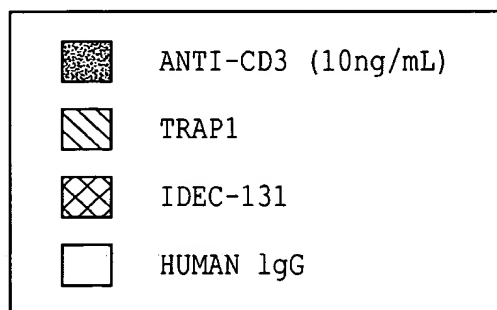
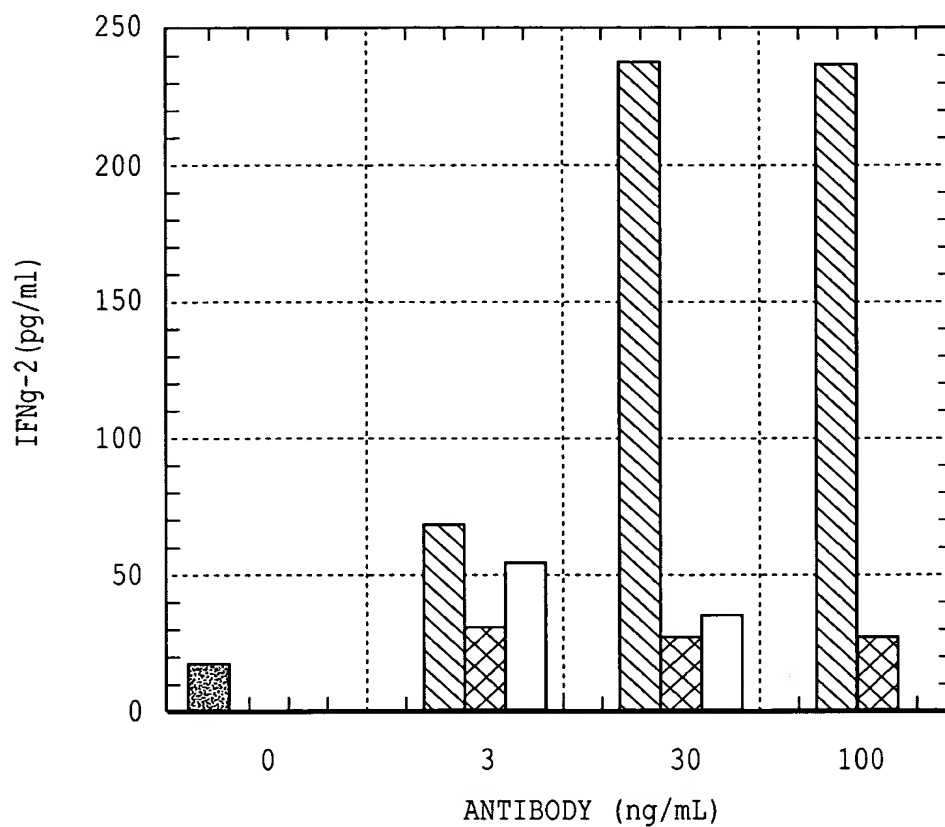


FIG. 19



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EFFECT OF ANTI-CD40L MONOCLONAL ANTIBODIES ON PROLIFERATION
OF HUMAN CD4 - T CELLS IN VITRO

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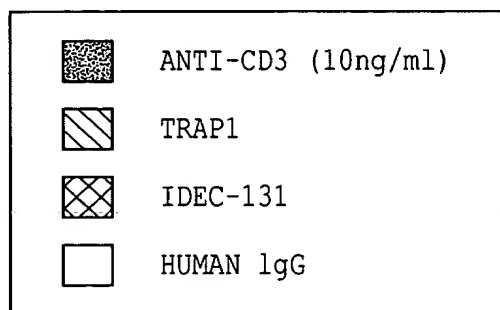
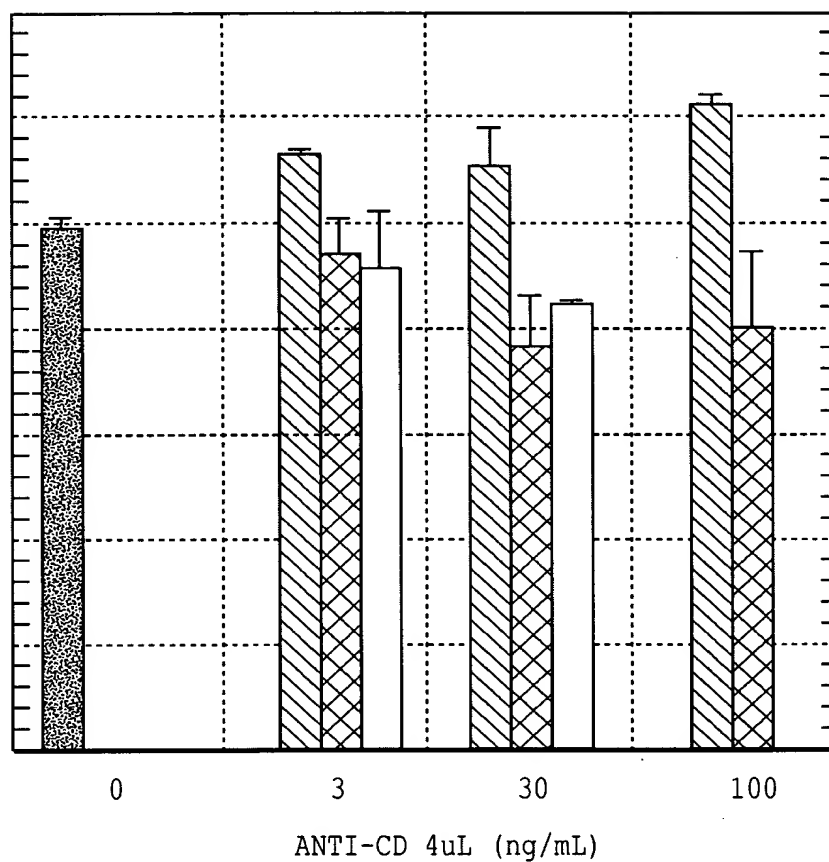


FIG. 20